

## 铁线莲属研究随记(Ⅲ)

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### Notes on the genus *Clematis* (Ranunculaceae) (Ⅲ)

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**Abstract** (1) The evolutionary trends of sepals and stamens of the genus *Clematis* are discussed; (2) New classifications for sect. *Cheiropsis* DC. and sect. *Aspidanthera* Spach are proposed; (3) One subsection, 13 series, 5 species and 4 varieties are described as new; (4) Six new ranks and 2 new combinations are made.

**Key words** *Clematis*; Evolutionary trends; Sect. *Cheiropsis*; Sect. *Aspidanthera*; New taxa; New ranks; New combinations

**摘要** (1)在铁线莲属的15个组330余种中,只有绣球藤组 sect. *Cheiropsis* 的5个种(短梗铁线莲 *Clematis brevipes* Rehd., 美花铁线莲 *C. potaninii* Maxim., 绣球藤 *C. montana* Buch.-Ham. ex DC., 薄叶铁线莲 *C. gracilifolia* Rehd. & Wils. 和金毛铁线莲 *C. chrysocoma* Franch.)的花与比自己原始的近缘属——银莲花属 *Anemone* 的花在构造上相近似,这表现在:萼片水平开展,膜质,倒卵形,顶端圆形或圆钝,内面无毛,外面被柔毛,但边缘无狭的短绒毛带;雄蕊无毛,花丝条形(linear)或狭条形,花药长圆形或狭长圆形,药隔顶端不突出,上述均是铁线莲属花的原始特征。在此属的其他种,可以看到萼片和雄蕊的形态发生了以下诸种变化:萼片从平展变为斜上方开展或甚至直立,质地变厚,呈纸质,有时甚至呈革质,形状多少变狭长,呈倒卵状长圆形、长圆形、倒披针形、披针形、条形,甚至狭条形,顶端有时变为渐尖或渐狭,内面出现了或疏或密的柔毛,外面边缘出现了一条极狭的短绒毛带;在雄蕊方面,花丝全长由等宽变为不等宽,呈狭披针形或狭倒披针形,花药变狭长,呈条形或狭条形,药隔顶端出现了短或长的突起,花丝或花药或二者上出现了或多或少的柔毛。上述的形态变化当均属衍生特征;(2)建立了绣球藤组 sect. *Cheiropsis* 和广布于北、南美洲和大洋洲具单性花的单性铁线莲组 Sect. *Aspidanthera* 的新分类系统;(3)描述了1新亚组,13新系,5新种,4新变种;(4)做出了6新等级,2新组合。

**关键词** 铁线莲属;演化趋势;绣球藤组;单性铁线莲组;新分类群;新等级;新组合

#### *Clematis* L

##### 1 绣球藤组

Sect. *Cheiropsis* DC. Syst. 1: 162. 1818; Prodr. 1: 9. 1824; Maxim. in Bull. Acad. Imp. Sci. St-Petersb. 22: 222. 1876; Tamura in Sci. Rep. Osaka Univ. 4: 51. 1956, 16(2): 34. 1967; in Acta Phytotax. Geobot. 38: 41. 1987; et in Hiepko (ed.) Nat. Pflanzenfam. Zwei. Auf., 17(4): 379. 1997; M. C. Chang in Fl. Reip. Pop. Sin. 28: 212. 1980; Snoeijer in *Clematis* 1992: 16. 1992; M. Johnson, *Clematis* 365. 1997. Lectotype: *C. cirrhosa* L.

While publishing his new species, *Clematis anemoniflora* (= *C. montana* Buch.-Ham. ex

DC.), D. Don (1825) in the protologue made a remark in Latin "Flores patuli, albi, fere *Anemone sylvestris*" in order to explain the meaning of the specific epithet he adopted for the plant. In the genus *Clematis*, besides *C. montana*, there are still four species, i. e. *C. brevipes* Rehd., *C. potaninii* Maxim., *C. gracilifolia* Rehd. & Wilson and *C. chrysocoma* Franch., all being members of sect. *Cheiropsis* too, with also flowers similar to those of the genus *Anemone*, which is a close ally of *Clematis* and more primitive than it. In the five species just mentioned, the sepals are spreading, membranous in texture, obovate in outline, at apex rounded or obtuse, adaxially glabrous, abaxially appressedly puberulous and without narrow velutinous margins; and the stamens are glabrous, with linear filaments and oblong or narrowly oblong anthers. In other sections of the *Clematis* with spreading sepals and glabrous stamens, e.g. sect. *Clematis*, sect. *Fruticella*, sect. *Aspidanthera*, sect. *Naraveliopsis* and sect. *Viticella*, the following morphological changes may be observed: the sepals are narrowed or elongated, oblong, oblanceolate, lanceolate or linear in outline, their apexes are sometimes acute, acuminate or attenuate, their margins are often covered with a narrow velutinous indumentum, the filaments sometimes become either narrowly lanceolate (sect. *Meclatis* subsect. *Orientalis*) or oblanceolate (sect. *Viticella*) in outline, and the anthers become more or less elongated, linear or narrowly linear in outline, and often bear short to long connective projections (Wang, 1998). In sect. *Aspidanthera*, the flowers become unisexual from bisexual. In sect. *Meclatis*, sect. *Archiclematis*, sect. *Viorna*, and sect. *Atragene*, the sepals become ascending or erect, and are ovate, narrowly ovate, or lanceolate in outline, usually membranous or papery, but sometimes coriaceous (sect. *Viorna*) in texture, and the stamens become hairy and sterile and more or less petaloid (sect. *Atragene*), showing an adaptation to certain change in pollination. In sect. *Pseudoanemone*, the sepals are often thicker, chartaceous or coriaceous in texture (*C. grandifolia* (Staner & Leon.) M. Johnson, *C. homblei* De Wild., *C. chrysocarpa* Welw. ex Oliv.), ovate or broadly ovate in outline, at apex acuminate to attenuate, and adaxially often densely puberulous or even velutinous, and the anthers are often elongated, linear or narrowly linear in outline (*C. chrysocarpa* Welw. ex Oliv., *C. speciosa* (Hutch.) M. Johnson). Looking through the floral structure of the whole genus, I believe that in the course of evolution to begin with the *Clematis montana* floral type some evolutionary trends of sepal and stamen have been formed, and due to the various changes of floral structure various groups of the genus have been differentiated.

Within the sect. *Cheiropsis*, some evolutionary trends found in the genus may also be observed, as shown in the following diagnostic key. For example, the sepals become ascending or erect from spreading, and narrowed, long elliptic, narrowly obovate-oblong, or lanceolate-oblong from obovate in outline, with acuminate apexes instead of rounded or obtuse ones, and the anthers become linear from oblong in outline. As to the inflorescence of this section, the phenomenon that the flowers are pedicellate only and together with leaves arise from axillary buds of old branch was considered to be secondary and an adaptation to temperate climate by Tamura (1967).

The sect. *Cheiropsis* consists of about 16 species. Twelve of them are concentrated in Southwest China and the Himalayas; one species among them (*C. montana*) from the distribution center eastward extends to the island Taiwan of China; and the other 4 species are endemic to North China

(Beijing), Japan, southern India, and the Mediterranean region respectively.

### Subsectionum et serierum clavis diagnostica

1. Sepala patentia, valvata.
  2. Flores in cymas 1 ~ 3-floras pedunculatas 2-bracteatas ex axillis foliorum rami homotini nascentes dispositi; lianae lignosae.
    3. Sepala obovata, 4 vel 5 ~ 7; cymae 1 ~ 3-florae ..... subsect. 1. **Potaninianae**
    3. Sepala oblanceolata, 4; cymae 3-multi-florae, saepe paniculiformes ..... subsect. 2. **Heynianae**
  2. Flores pedicellati tantum, nec pedunculati, nec bracteati, saepe cum foliis aliquot simul ex gemma axillari rami veteris nascentes.
    4. Fruticuli humiles erecti; folia simplicia, palmatim 5-lobata; sepala 5 ~ 8, anguste obovata, glabra ..... subsect. 3. **Acerifoliae**
    4. Lianae lignosae; folia ternata vel pinnata; sepala 4 (~ 6), plus minusve puberula.
      5. Folia ternata, raro 5-foliolatum pinnata, plus minusve puberula, foliolis margine vulgo dentatis, raro integris; sepala 4 ..... subsect. 4. **Montanae**
      6. Sepala obovata vel anguste ovata, apice rotundata vel obtusa, raro acuta; antherae oblongae vel anguste oblongae ..... ser. 1. **Montanae**
      6. Sepala longe elliptica vel lanceolato-oblonga, apice acuminata vel attenuata; antherae lineares ..... ser. 2. **Tonghuenses**
    5. Folia pinnata, glabra, foliolis margine integris; sepala 4 vel 6, obovato-oblonga ..... subsect. 5. **Hastatae**
1. Sepala ascendentia vel suberecta, 4; lianae lignosae.
  7. Flores pedicellati tantum, nec pedunculati, nec 2-bracteati, aliquot tantum vel cum foliis simul e gemma axillari rami veteris nascentes; sepala 4, valvata, anguste obovata; achenia lanceolata ..... subsect. 6. **Fasciculiflorae**
  7. Flores in cymas 1-floras pedunculatas 2-bracteatas vel involucratas cum foliis aliquot e gemma axillari rami veteris nascentes dispositi.
    8. Cymae 2-bracteatae; sepala imbricata, ascendentia, late ovata; folia ternata ..... subsect. 7. **Williamsianae**
    8. Cymae involucratae; sepala valvata, suberecta, oblongo-obovata vel oblonga; folia simplicia vel ternata ..... subsect. 8. **Cirrhosae**

Subsect. 1. **Potaninianae** W. T. Wang in Acta Phytotax. Sin. 36(2): 162. 1998, sphalm. *Potaniana*, et 38(5): 401. 2000. TYPE: *C. potaninii* Maxim. — Sect. *Clematis* subsect. *Potaniniana* M. Johnson, Klematis 410, 451. 1997, p. p. excl. *C. trichotoma* Nakai. TYPE: *C. potaninii* Maxim.

Lianae lignosae. Folia semel vel bis pinnata. Flores in cymas 1 ~ 3-floras pedunculatas 2-bracteatas ex axillis foliorum rami homotini nascentes dispositi. Sepala 4 ~ 6 (~ 7), valvata, patentia, obovata vel anguste obovata, apice rotundata. Antherae anguste oblongae, apice obtusae.

2 species (*C. brevipes* Rehd., *C. potaninii* Maxim.), endemic to SW China.

Subsect. 2. **Heynianae** W. T. Wang in Acta Phytotax. Sin. 38(5): 402. 2000. TYPE: *C. heynei* Rau.

Lianae lignosae. Folia ternata. Flores in cymas 1-multi-floras saepe paniculiformes pedunculatas 2-bracteatas ex axillis foliorum rami homotini nascentes dispositi. Sepala 4, valvata, patentia, oblanceolata, apice rotundata. Antherae lineares, apice minute apiculatae.

1 species, endemic to S India.

Subsect. 3. **Acerifoliae** W. T. Wang in Acta Phytotax. Sin. 36(2): 101. 1998. TYPE: *C.*

*acerifolia* Maxim.

Fruticuli humiles, erecti. Folia simplicia, palmatim 5-lobata. Flores ca. 2 tantum vel cum foliis gemma axillari folii supremi nascentes. Sepala 5 ~ 8, valvata, anguste obovata, glabra. Antherae oblongae vel anguste oblongae, apice obtusae.

1 species, endemic to Beijing, China.

In most species of *Clematis*, the sepals are usually hairy abaxially or sometimes on both surfaces. Only in *C. acerifolia* Maxim. and *C. sichotelinensis* Ulan. (Sect. *Clematis* subsect. *Rectae*, see below), the sepals are absolutely not covered with any hairs.

Subsect. 4. **Montanae** Schneid. Ill. Handb. Laub. 290. 1906; Hand.-Mazz. in Acta Hort. Gotob. 13: 210. 1939, p. p; M. Johnson, *Clematis* 386. 1997, p. p. TYPE: *C. montana* Buch.-Ham. ex DC.

Lianae lignosae. Folia ternata, raro pinnata (*C. gracilifolia*), plus minus puberula. Flores pedicellati tantum, nec pedunculati, nec 2-bracteati, 1 ~ 6 vulgo cum foliis aliquot e gemma axillari rami veteris vel rami abbreviati nascentes, interdum solitarii in axillis foliorum rami hornotini siti. Sepala 4, valvata, patentia, obovata, longe elliptica, oblonga, vel lanceolato-oblonga. Antherae oblongae, anguste oblongae vel lineares, apice vulgo obtusae, raro minute apiculatae.

6 species, wide-spread from the Himalayas eastwards through the Chinese subtropical regions extending to the island Taiwan of China.

Ser. 1. **Montanae** Rehd. & Wils. in Sarg. Pl. Wils. 1: 331. 1913; Tamura in Sci. Rep. Osaka Univ. 4: 51. 1955; et in Acta Phytotax. Geobot. 16(3): 80. 1956. Lectotype: *C. montana* Buch.-Ham. ex DC.

Sepala obovata vel anguste obovata, apice rotundata vel obtusa, raro acuta. Antherae oblongae vel anguste oblongae.

5 species (*C. montana* Buch.-Ham. ex DC., *C. gracilifolia* Rehd. & Wils., *C. venusta* M. C. Chang, *C. chrysocoma* Franch., *C. tripartita* W. T. Wang), with the proximately same distribution area as the subsection.

**1.1 *Clematis montana* Buch.-Ham. ex DC. var. *urosepala* W. T. Wang, var. nov. Fig. 2: 1 ~ 2**

A var. *montana* differt sepalis apice in projecturas anguste caudiformes 6 ~ 11 mm longas abrupte contractis extus secus margines late velutinis, pedicellis 17 ~ 20 cm longis.

**Myanmar:** Tama Bum, alt. 3000 m, in an open valley in the *Abies-Rhododendron* forest. 1953-06-20, F. Kingdon Ward 21038 (holotype, GH).

This new variety differs from var. *montana* in its sepals being at apex abruptly contracted into tail-shaped narrow projections 6 ~ 11 mm long and abaxially along margins broadly velutinous and inits pedicels 17 ~ 20 cm long. In var. *montana*, the sepals are at apex without any projections and abaxially appressed-puberulous, and the pedicels are shorter, 3 ~ 10 cm long.

**1.2 深裂铁线莲 新种 图 2: 3 ~ 4**

***Clematis tripartita* W. T. Wang, sp. nov. Fig. 2: 3 ~ 4**

Affinis *C. montanae* Buch.-Ham. ex DC., quae ramis plus minusve puberulis, foliolis terminalibus rhombicis rhombico-ovatis vel ellipticis indivisis vel 3-lobatis, sepalis obovatis vel late oblongis recedit.

Liana lignosa. Rami 1.8 ~ 3 mm diametro, vadosae 6 ~ 10-canaliculati, glabri. Folia ternata;

foliola crasse papyracea vel coriacea, terminalia late rhombica, 6 ~ 15 mm longa, 6 ~ 14 mm lata, apice acuta, basi late cuneata, fere ad basin 3-partita, lobis rhobis 3-lobulatis, lateralia leviter minora, oblique ovata, inaequaliter 2 ~ 3-lobulata, lobis margine saepe 1 ~ 2-denticulatis, utrinque adpresse puberula, nervis basalibus subtus fere planis; petioli 1 ~ 1.8 cm longi, puberuli. Flores 1 ~ 6 cum foliis 2-jugis e gemma axillari rami veteri nascentes, 2 ~ 2.7 cm diametro; pedicelli graciles, 2.8 ~ 4 cm longi, dense puberuli; sepala 4, alba, patentia, late oblanceolata, obovato-oblonga vel oblonga, 11 ~ 15 mm longa, 4 ~ 6 mm lata, apice acuta vel obtusa, intus glabra, extus adpresse puberula; stamina 4 ~ 7 mm longa, glabra, filamentis linearibus vel anguste linearibus interdum antheris latioribus, antheris anguste oblongis vel sublinearibus 2 ~ 2.2 mm longis apice obtusis; carpella ca. 12, ovariis pubescentibus, stylis 5 mm longis dense villosis apice circinato-recurvatis.

**China. Xizang:** Nyalam (聂拉木), 7 km in the south of the city, alt. 4000 m, on slopes. fl. white, 1990-06-09, Sino-Japan. Exped. T450 (holotype, PE); Nyalam, Quxiang (曲乡), alt. 3000 m, 1990-06-06, Sino-Japan. Exped. T325 (PE).

**Nepal:** Lantang Valley, alt. 3780 m, at edge of moraine, plant trailing over *Berberis*, 1965-06-25, Schilling, Saywo & Bista 400 (K).

This new species is distinguished from *C. montana* by its smaller leaflets being usually broadly rhombic in outline, 0.6 ~ 1.5 cm long, 0.6 ~ 1.4 cm broad, 3-parted, by its broadly oblanceolate sepals, and by its densely puberulous ovaries. In *C. montana*, the leaflets are larger, ovate or rhombic-ovate in outline, 2 ~ 7 cm long, 1 ~ 5 cm broad, 3-lobulate or 3-lobed, the sepals are obovate, and the ovaries are usually glabrous.

### 1.3 毛果薄叶铁线莲 新变种

***Clematis gracilifolia*** Rehd. & Wils. var. ***lasiocarpa*** W. T. Wang, var. nov.

A var. *gracilifolia* differt acheniis sparse adpresseque puberulis.

**China. Xizang:** Lhtnze (隆子), Jiayu (加玉), alt. 3500 m, in bushes on slopes, fl. white, 1975-07-03, Qinghai-Xizang Exped. 75-446 (holotype, PE).

In var. *gracilifolia*, the achenes are glabrous.

Ser. 2. ***Tongluenses*** W. T. Wang, ser. nov. TYPE: *C. tongluensis* (Brühl) Tamura.

Sepala longe elliptica vel lanceolato-oblonga, apice acuminata vel attenuata. Antherae lineares.

3 species [*C. manipurensis* (Brühl) W. T. Wang. *C. khasiana* (Brühl) W. T. Wang, *C. tongluensis* (Brühl) Tamura], distributed in N Myanmar, NE India, Bhutan, China (SE Xizang), Sikkim, and E Nepal.

**1.4 *Clematis manipurensis*** (Brühl) W. T. Wang, st. et comb. nov. — *C. montana* DC., var. *manipurensis* Brühl in Ann. Bot. Gard. Calc. 5(2): 74, pl. 103, fig. 3. 1896. — *C. montana* ssp. *normalis* Kuntze var. *manipurensis* Brühl ex Gupta in Bull. Nat. Bot. Gard. Lucknow 80: pl. 36. 1963. — *C. montana* ssp. *montana* var. *manipurensis* Brühl ex Kapoor in Bull. Nat. Bot. Gard. Lucknow 124: 47, cum descr. ampla. 1966; Rau in Sharma *et al.* Fl. Ind. 1: 71. 1993; M. Johnson, *Clematis* 401. 1997. TYPE: India. Manipur, Watt 6439 (isotypes, E! P!); Naga Hills, Colomb s. n. (syntype, not seen).



Fig.1 *Clematis manipurens* var. *manipurens* 1. Flowering branch; 2. Stamen (from Watt 6439). 3~4. *C. tongluensis* var. *tongluensis* 3. Flowering branch; 4. Stamen (from Anderson 336). 5~6. *C. khasiana* 5. Flowering branch; 6. Stamen (from Clarke 43796A).

**1.4a** Var. *manipurensis* Fig. 1: 1~2

Rami glabri. **India.** Manipur, Watt 6890 (P).

Distribution: India (Manipur), Myanmar.

**1.4b** *Clematis manipurensis* var. *lasioclada* W. T. Wang, var. nov.

A var. *manipurensi* differt ramis dense adpresseque puberulis.

**Bhutan:** Cheudebi, alt. 2200 m, 1937-05-12, Ludlow & Sherriff 3027 (holotype, BM).

**1.5** *Clematis khasiana* (Brühl) W. T. Wang, st. et comb. nov. — *C. montana* var. *khasiana* Brühl in Ann. Bot. Gard, Calc. 5(2): 74, pl. 103, fig. 2. 1896. — *C. montana* ssp. *sinchugica* Kuntze var. *khasiana* (Brühl) Gupta in Bull. Nat. Bot. Gard, Lucknow 80: pl. 39. 1963. — *C. tongluensis* (Brühl) Tamura var. *khasiana* (Brühl) Kapoor in Bull. Nat. Bot. Gard, Lucknow 124: 75, cum descr, ampla, 1966; Rau in Sharma *et al.* Fl. Ind. 1: 79. 1993; M. Johnson, Klematis 405. 1997. TYPE: India. Khasia, collector's name of the type specimen not stated in the protologue (holotype, CAL, not seen).

**India.** Khasia; J. D. Hooker & Thomson s. n. (K), Clarke 43796A (BM).

Distribution: NE India (Maghalaya).

**1.6** 毛萼铁线莲 新变种

*Clematis tongluensis* (Brühl) Tamura var. *mollisepala* W. T. Wang, var. nov.

A var. *tongluensi* differt sepalis extus dense adpresseque puberulis.

**China. Xizang:** Nangxian (朗县), Migyitun, alt. 2800 m, 1936-06-10, Ludlow & Sherriff 2103 (holotype, BM).

In var. *tongluensis*, the sepals are glabrous abaxially.

Among the three species of subsect. *Tongluenses*, *C. manipurensis* and *C. khasiana* (Fig. 1: 5~6) are closely related to each other in having the following floral characters in common: sepals being long elliptic in outline and glabrous adaxially. In *C. manipurensis*, the leaflets are papery in texture, and the flowers arise from axillary buds of old branch together with leaves; while in *C. khasiana*, the leaflets are coriaceous in texture, and the flowers are solitary in leaf axils of horizontal branch. *C. tongluensis* (Fig. 1: 3~4) differs from the former two species in its narrowly lanceolate-oblong sepals puberulous adaxially. Its flowers are either solitary in leaf axils of horizontal branch or arise from axillary buds of old branch together with leaves.

Subsect. 5. *Hastatae* (W. T. Wang) W. T. Wang, st. et comb. nov. — Sect. *Clematis* subsect. *Rectae* Prantl ser. *Hastatae* W. T. Wang in Acta Phytotax. Sin. 36(2): 159. 1998. TYPE: *C. hastata* Finet & Gagnep.

Lianae lignosae. Folia pinnata, glabra. Flores pedicellati tantum, nec pedunculati, nec 2-bracteati, saepe cum foliis simul e gemma axillari rami veteris nascentes. Sepala 4 vel 6, valvata, oblanceolata vel obovato-oblonga, apice rotundata. Antherae anguste oblongae vel lineares.

2 species (*C. hastata* Finet & Gagnep., *C. glabrifolia* K. Sun & M. S. Yan), endemic to SW China.

Subsect. 6. *Fasciculiflorae* (Tamura) W. T. Wang, st. et comb. nov. — Sect. *Flammula* subsect. *Rectae* ser. *Fasciculiflorae* Tamura in Sci. Rep. Osaka Univ. 4: 53. 1955. — Sect. *Flammula* subsect. *Fasciculiflorae* (Tamura) M. Johnson, Klematis 604. 1977. TYPE: *C. fas-*



*ciculiflora* Franch.

Sect. *Cheiroopsis* subsect. *Montanae* ser. *Fasciculiflorae* W. T. Wang in Acta Phytotax. Sin. 36(2): 162. 1998, syn. nov. TYPE: *C. fasciculiflora* Franch.

Lianae lignosae. Folia ternata. Flores pedicellati tantum, nec pedunculati, nec 2-bracteati, 2 ~ 4 tantum vel cum foliis simul e gemma axillari rami veteris nascentes. Sepala 4, valvata, suberecta, anguste obovata vel obovato-oblonga. Antherae anguste oblongae.

Monotypic, endemic to SW China and N Vietnam.

Subsect. 7. **Williamsianae** M. Johnson, Klematis 366, 383. 1997. TYPE: *C. williamsii* Gray.

Lianae lignosae. Folia ternata. Flores in cymas 1-floras pedunculatas 2-bracteatas cum foliis aliquot e gemma axillari rami veteris nascentes dispositi vel solitarii in axillis foliorum rami homotini siti. Sepala 4, imbricata, ascendente, late ovata, apice acuta. Antherae anguste oblongae.

1 species, endemic to Japan.

Subsect. 8. **Cirrhosae** Prantl in Bot. Jahrb. 9: 259. 1888. Lectotype: *C. cirrhosa* L. —

Sect. *Cheiroopsis* subsect. *Cheiroopsis* M. Johnson, Klematis 365. 1997, syn. nov. TYPE: *C. cirrhosa* L.

Lianae lignosae. Folia simplicia vel ternata. Flores in cymas 1-floras pedunculatas involucratas cum foliis aliquot e gemma axillari rami veteris nascentes dispositi. Sepala 4, valvata, suberecta, obovato-oblonga vel oblonga. Antherae oblongae vel anguste oblongae.

2 species (*C. napaulensis* DC., *C. cirrhosa* L.), wide-spread in SW China, the Himalayas, SW Asia, S Europe, and N Africa.

## 2 威灵仙组 Sect. *Clematis*

威灵仙亚组 Subsect. **Rectae** Prantl.

Ser. **Sichotealinenses** W. T. Wang, ser. nov. TYPE: *C. sichotealinensis* Ulan.

Folia bipinnata, foliolis chartaceis vel subcoriaceis ovatis margine saepe paucis dentatis 3-partitis vel 3-lobatis, lobis terminalibus lanceolatis. Cymae solitariae in axillis foliorum sitae, 3 ~ 5-flo-  
rae, corymbiformes. Sepala 4, glabra.

1 species, endemic to Far East Region of Russia.

**2.1 *Clematis sichotealinensis*** Ulan. in Bot. Zhur. 66(9): 1325. 1981; Serov in Bot. Zhur. 73 (12): 1739. 1988; M. Johnson, Klematis 620. 1997. TYPE: Russia. Prov. Primorskij Kraj: Distr. Anucino, Sichote-Alin Mts., 1977-06-28, Ulanova & Gorovoi 6372 (lectotype, LE, not seen; isolectotypes, GH! S!)

Both Serov (1988) and Johnson (1997) correctly placed this species near *C. mandshurica* Rupr. according to the similar floral structures of the two species. However, *C. sichotealinensis* is rather curious in its glabrous sepals (see the above discussion under *C. acerifolia* Maxim.) and bipinnate leaves with smaller usually dentate leaflets, and by these characters may clearly be distinguished from the species of the series *Rectae* Rehd. & Wils., *Armandianae* W. T. Wang, *Uncinatae* Tamura, and *Crassifoliae* Tamura of subsect. *Rectae* Prantl, in which the leaflets have entire margins and the sepals are abaxially more or less hairy and on margins densely velutinous, and may represent an advanced series within that subsection.



Ser. **Zemuenses** W. T. Wang, ser. nov. TYPE: *C. zemuensis* W. W. Smith

Rami hornotini cum foliis ca. 3-jugatis simul e gemma axillari rami veteris nascentes. Folia bipinnata, foliolis papyraceis ovatis margine irregulariter dentatis 3-lobatis vel 3-partitis. Cymae 1 ~ 7-florae, umbelliformes, solitariae in axillis foliorum fasciculatarum e gemma axillari rami veteris nascentium sitae, vel solitariae in foliorum inferiorum axillis rami hornotini sitae. Sepala 4 (~ 5), intus ad nervos sparse puberula, extus adpresse puberula, margine velutina.

1 species, distributed in Bhutan, Sikkim, and Nepal.

**2.2 *Clematis zemuensis*** W. W. Smith in Rec. Bot. Surv. India 4: 166. 1913; Mukerjee in Bull. Bot. Surv. Ind. 1(1): 140. 1959; Gupta in Bull. Nat. Bot. Gard. Lucknow 54: pl. 21. 1961; Kapoor in l. c. 78: 4. 1962 et 124: 2. 1966; Hara in Hara & Williams, Enum. Flow. Pl. Nepal 2: 16. 1979; Grierson & Long, Fl. Bhutan 1(2): 291. 1984; Rau in Sharma *et al.* Fl. Ind. 1: 80. 1993; M. Johnson, Clematis 450. 1997. TYPE: Sikkim, Zemu Valley, alt. 9000 ft., 1909-07-20, W. W. Smith & Cave 2671 (holotype, E, not seen; isotype, K!).

**Nepal:** Lumsum, Stainton, Sykes & Williams 3514 (GH, UPS); Phulchoki, south of Kathmandu, Hara *et alia* 72-3354 (GH).

In the protologue, the author of *Clematis zemuensis*, W. W. Smith compared his new species with *C. puberula* Hook. f. & Thoms. In his monograph, Johnson (1997) placed this species near *C. puberula* in sect. *Clematis* subsect. *Pierotianae*. In fact, *C. zemuensis* is characterized by the hornotinous branches arising together with leaves from axillary buds of old branch, and by the linear anthers (Fig. 3: 7 ~ 9), and by these characters is different from *C. puberula* and its allies, e.g. *C. apiifolia* DC., *C. gouriana* Roxb. ex DC., and *C. vitalba* L., belonging to sect. *Clematis* subsect. *Clematis* (Wang, 1998), in which the hornotinous branches alone arise from the axillary buds of old branch, and the anthers are oblong in outline. According to its peculiar characters, *C. zemuensis* should be placed in sect. *Clematis* subsect. *Rectae*, and there, just as *C. sichotealinensis*, also represents an advanced monotypic series.

### 3 单性铁线莲组

Sect. **Aspidanthera** Spach, Hist. Nat. Veg. Phan. 7: 283. 1839; Tamura in Hiepko (ed.) Nat. Pflanzenfam. Zwei. Auf., 17(4): 380. 1995. Lectotype: *C. aristata* R. Br. ex Ker Gawl-er.

I followed Tamura (1995) to classify the approximately 64 species with unisexual flowers widespread in North America, South America, Oceania, and Madagascar into the sect. *Aspidanthera* in the belief that these species might originate from a common ancestral group, i.e. the sect. *Clematis*. In different regions of the vast distribution area of the section, various groups of it have been differentiated, and are treated as subsections in the following classification. Among the subsections, subsect. *Dioicae* may be the extant primitive group of the section, because many species of it are more or less similar to those of sect. *Clematis* subsect. *Clematis* in both vegetative and reproductive organs, e.g. the American dioecious species, *C. virginiana* L. has a strong resemblance to the eastern Asian bisexual one, *C. apiifolia* DC. In other subsections, the sepals become narrowed or more or less elongated, narrowly oblong, linear, or narrowly linear in outline, and in the species of New Zealand, their narrow marginal velutinous indumenta disappear; the staminodes in the pistillate

flower decrease in number or entirely disappear at length (subsect. *Insidiosae*); and the leaflets in many species become thicker, subcoriaceous to thickly coriaceous (*C. cruttwellii*, *C. sclerophylla*, *C. novocaledoniaensis*) in texture. Bearing such secondary characters, these subsections are proved to be more advanced than subsect. *Dioicae*.

### Subsectionum et serierum clavis diagnostica

1. Flos pistillatus staminodiis instructus, sepalis vulgo patentibus.
  2. Sepala 4, raro 4~6 (*C. gentianoides*), valvata, extus ad margines anguste velutina raro dense puberula (*C. microphylla*).
    3. Antherarum connectiva apice haud producta, rarissime in projecturas minutas punctiformes vix 0.1 mm longas producta.
      4. Sepala obovato-oblonga, oblonga, oblanceolata, vel anguste ovata, staminibus paulo longiora vel eis subaequilongia; staminodia vulgo multa.
        5. Inflorescentia ex axilla folii rami hornotini nascens ..... subsect. 1. **Dioicae**
          6. Folia semel vel bis ternata vel pinnata, foliolis 3~15 magnis vel mediocribus 2~12 cm longis ..... ser. 1. **Dioicae**.
            6. Folia ter pinnata, foliolis numerosis parvis 0.2~1 (~2) cm longis ..... ser. 2. **Millefoliolatae**
          5. Inflorescentia cum foliis aliquot e gemma axillari rami veteris nascens ..... subsect. 2. **Lasianthae**
        4. Sepala lanceolato-linearia, linearia, vel anguste linearia, staminibus 2~4-plo longiora; staminodia 2~16 ..... subsect. 3. **Microphyllae**
      3. Antherarum connectiva apice conspicue producta ..... subsect. 4. **Aristatae**
        7. Connectivorum projecturae globoso-conicae, 0.1~0.2 mm longae et crassae ..... ser. 1. **Pickeringianae**
        7. Connectivorum projecturae graciliter columnares vel graciliter subulatae, 0.5~4.5 mm longae ..... ser. 2. **Aristatae**
    2. Sepala 4~8, valvata vel imbricata, extus ad margines haud velutina, staminibus 2~3-plo longiora; staminodia 2~5 (~8~13) ..... subsect. 5. **Hexapetalae**
      8. Sepala 4.
        9. Foliorum laminae vulgo nullae; pedicellus bracteolis bene evolutis carens ..... ser. 1. **Afoliatae**
        9. Foliorum laminae bene evolutae; pedicellus bracteolis oppositis bene evolutis instructus ..... ser. 2. **Maratae**
      8. Sepala (4~) 5~8.
        10. Lianae lignosae; folia semel vel bis ternata; sepala lanceolata vel anguste oblonga; staminodia 3~5 ..... ser. 3. **Hexapetalae**
        10. Plantae erectae, humiles, suffrutescentes; folia simplicia; sepala anguste obovata; staminodia 8~13 ..... ser. 4. **Marmorariae**
    1. Flos pistillatus staminodiis carens, sepalis 4 erectis ..... subsect. 6. **Insidiosae**
      11. Folia pinnata, 5-foliolata, foliolis 3~6 cm longis ..... ser. 1. **Insidiosae**
      11. Folia bis vel ter pinnata, foliolis numerosis minoribus 0.3~2.2 cm longis ..... ser. 2. **Rutoides**

Subsect. 1. **Dioicae** (Prantl) W. T. Wang, st. et comb. nov. — Sect. *Flammula* DC.

10. *Vitalbae* Prantl c. *Dioicae* in Bot. Jahrb. 9: 260. 1888. Lectotype: *C. dioica* L. — sect. *Clematis* subsect. *Dioicae* (Prantl) Tamura in Sci. Rep. Osaka Univ. 16(2): 33. 1967; in Acta Phytotax. Geobot. 38: 41. 1987; Snoeijer in *Clematis* 1992: 15. 1992; M. Johnson, *Clematis* 471. 1997, syn. nov.

Folia semel vel bis ternata vel pinnata, raro ter pinnata. Inflorescentia ex axilla folii rami hornotini nascens. Sepala 4, valvata, patentia, obovato-oblonga, oblonga, vel oblanceolata, extus ad

margines anguste velutina, staminibus paulo longiora vel eis subaequilonga. Connectivum haud productum. Staminodia vulgo praesentia, multa.

Ca. 29 species, wide-spread in North America and South America.

Ser. 1. **Dioicae** W. T. Wang, ser. nov. TYPE: *C. dioica* L.

Folia semel vel bis ternata vel pinnata, foliolis 3 ~ 15 magnis vel mediocribus 2 ~ 12 cm longis

Ca. 27 species, wide-spread in North America (*C. virginiana* L., *C. ligusticifolia* Nutt., *C. drummondii* Torr. & Gray, *C. catesbyana* Pursh) and South America (*C. goudotiana* Planch. & Triana, *C. polygama* Jacq., *C. dioica* L., *C. bonariensis* Juss. ex DC., *C. guadeloupae* Pers., *C. grahamii* Benth., *C. brasiliensis* DC., *C. coahuilensis* Keil, *C. bahamica* (Kuntze) Britton., *C. plukenetii* DC., *C. caleoides* Stend. & Stey., *C. heankeana* Presl, *C. grossa* Benth., *C. alborosea* Ulbr., *C. urubensis* Lourt., *C. acapulcensis* Hook. & Arn., *C. affinis* St. Hilaire, *C. peruviana* DC., *C. barahonensis* Urban, *C. flammulastrum* Griseb., *C. campestris* St. Hilaire, etc.).

Ser. 2. **Millefoliolatae** W. T. Wang, ser. nov. TYPE: *C. millefoliolata* Eichler.

Folia ter pinnata, foliolis numerosis parvis 0.2 ~ 1 (~ 2) cm longis.

2 species (*C. seemannii* Kuntze, *C. millefoliolata* Eichler), occurring in Peru and Bolivia.

Subsect. 2. **Lasianthae** (Tamura) W. T. Wang, st. et comb. nov. — Sect. *Lasiantha* Tamura in Sci. Rep. Osaka Univ. 16(2): 34. 1967; in Acta Phytotax. Geobot. 34:41. 1987; et in Hiepko (ed.) Nat. Pflanzenfam. Zwei. Auf., 17(4): 381. 1995; Snoeijer in Clematis 1992: 16. 1992; M. Johnson, Klematis 489. 1997. TYPE: *C. lasiantha* Nutt.

Folia pinnata, 5-foliolata, vel ternata. Inflorescentia cum foliis e gemma axillari rami veterini nascens. Sepala 4, valvata, patentia, oblanceolata, extus ad margines anguste velutina, staminibus paulo longiora. Connectivum haud productum, raro minute inconspicue productum. Staminodia vulgo praesentia, multa.

2 species (*C. pauciflora* Nutt., *C. lasiantha* Nutt.), distributed in SW North America.

Subsect. 3. **Microphyllae** W. T. Wang, subsect. nov. TYPE: *C. microphylla* DC. —

Sect. *Flammula* 10. *Vitalbae* d. *Hexapetalae* Prantl in Bot. Jahrb. 9: 260. 1888. p. p. m., quoad *C. microphylla* DC.

Folia bis ternata vel pinnata, raro ter pinnatisecta. Inflorescentia ex axilla folii rami hornotini nascens. Sepala 4, valvata, patentia, linearia vel anguste linearia, extus ad margines anguste velutina vel dense puberula, staminibus 2 ~ 4-plo longiora. Connectivum haud productum. Staminodia praesentia, 2 ~ 16.

5 species (*C. fawcettii* Mueller, *C. brachystemon* Gunn, *C. microphylla* DC., *C. lineariifolia* Steud., *C. delicata* H. Eichler), wide-spread in Australia and Tasmania.

**3.1 Clematis brachystemon** Gunn, in herb., sp. nov. — *C. hexapetala* L. f. ssp. *brachystemon* Kuntze in Verh. Bot. Ver. Brand. 26: 108. 1885. TYPE: the same as those of *C. brachystemon* Gunn. Fig. 2: 5 ~ 8

Affinis *C. microphyllae* DC., quae foliis semel vel bis pinnatis, foliolis plerumque lanceolato-linearibus vel anguste oblongis differt. A hac specie nova *C. fosteri* Gmel. (*C. hexapetala* L. f) foliis plerumque ovatis 1.4 ~ 4 cm latis basi cordatis vel subcordatis, floris staminati sepalis 5 ~ 7 albis, ejus pistillati sepalis ca. 6 albis, omnibus extus ad margines minus dense puberulis recedit.

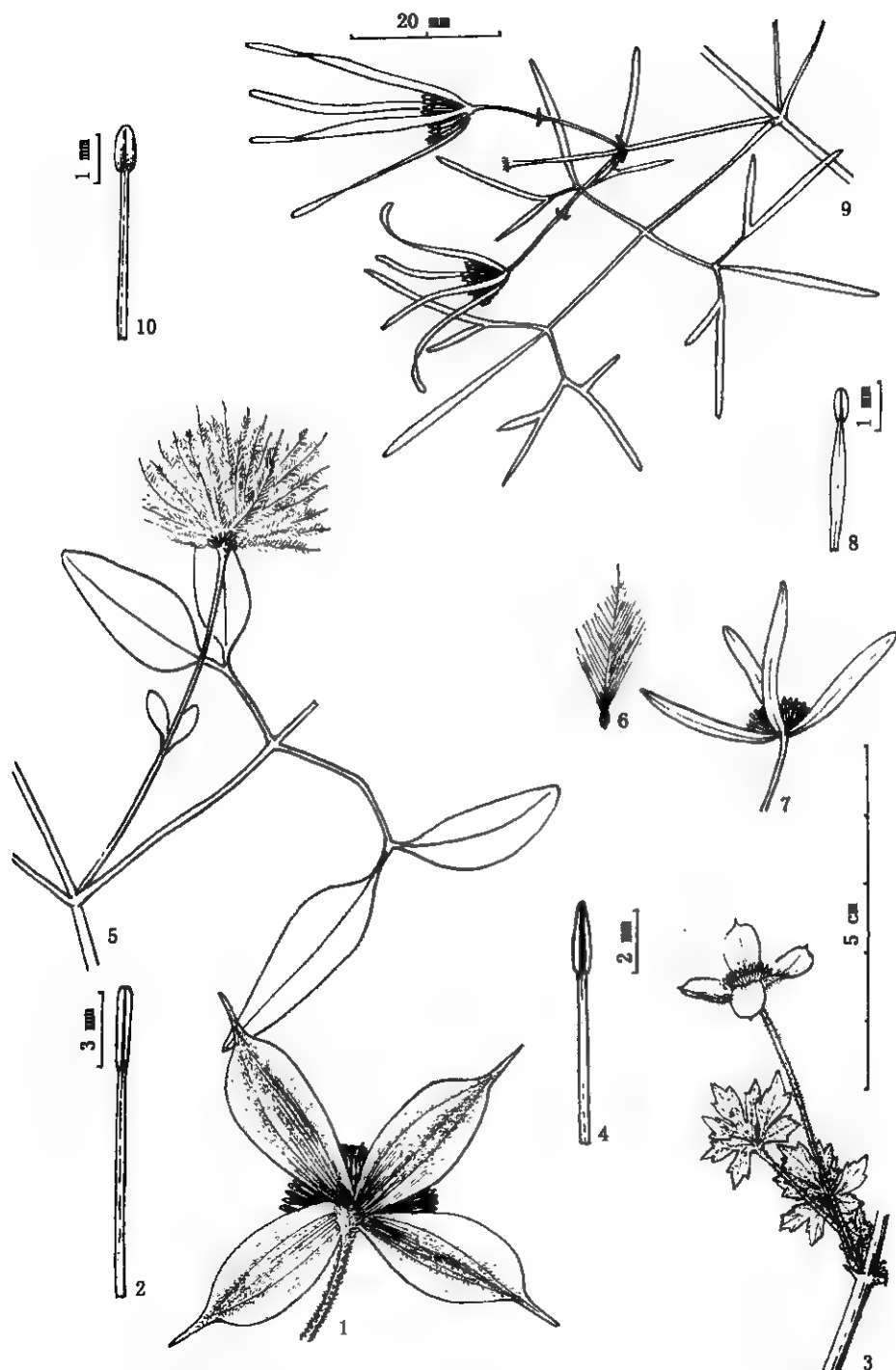


Fig. 2 1~2. *Clematis montana* var. *urosepala* 1. Flower; 2. Stamen (from F. Kingdon Ward 21038). 3~4. *C. tripartita* 3. Part of flowering branch; 4. Stamen (from Sino-Japanese Exped. T450). 5~8. *C. brachystemon* 5. Part of fruiting branch; 6. Young achene; 7. Staminate flower; 8. Stamen (from Gunn 1933). 9~10. *C. delicata* 9. Part of branch with a staminate cyme; 10. Stamen (from Drummond 1).

Liana lignosa, dioica. Rami subteretes, 1~2 mm diametro, vadosae 8-canaliculati, sparse puberuli vel subglabri. Folia bitemata vel ternata; foliola subcoriacea, late lanceolata vel anguste ovata, raro ovata, 1.5~4.2 cm longa, 0.8~1.6 cm lata, apice obtusa vel leviter acuta, basi late cuneata, margine integra, utrinque inferne sparsissime puberula vel subglabra, nervis basalibus 3 subtus paulo prominulis vel planis; petioli 3~10 mm longi. Cymae staminatae axillares, 7~20-florae; pedunculi 6~10 mm longi; bracteae simplices, late lanceolatae, vel ternatae. Flos staminatus 2.2~3.4 cm diametro; pedicellus 4~7 mm longus, dense puberulus; sepala 4, lutea, patentia, lanceolato-lineararia vel lineararia, 1.2~1.8 cm longa, 2~3.6 mm lata, apice obtusa, mucronata, intus glabra, extus adpresse puberula, margine dense puberula vel subvelutina; stamina 3~5.5 mm longa, glabra, filamentis linearibus, antheris oblongis vel late oblongis 0.8~1 mm longis apice obtusis. Cymae pistillatae axillares, 1~3-florae; pedunculi 1.1~2.2 cm longi, cum pedicellis puberuli; bracteae petiolatae, late lanceolatae, ca. 1.8 cm longae, vel sessiles, spathulatae, 5~7 mm longae. Flos pistillatus ca. 2.5 cm diametro; pedicellus 1.2~2 cm longus; sepala 4, lutea, suberecta, lanceolato-lineararia, 2~2.3 cm longa, 3~3.8 mm lata, apice leviter obtusa, intus glabra, extus adpresse puberula, margine dense puberula; staminodia ca. 4, anguste lineararia, 1.2~1.4 cm longa; ovaria glabra; styli ca. 1.5 cm longi, dense villosi.

**Australia:** Tasmania, Sand Hills, George Town, fl. yellow. 1844-10-21, Gunn 1933 (♂, holotype, K!); same locality, 1844-10-23, Gunn 1933a (♀, K)

### 3.2 *Clematis delicata* H. Eichler, in herb., sp. nov. Fig. 2: 9~10

Affinis *C. linearifoliae* Steud., quae foliolis bipinnatis vel bitematis, foliolis petiolulatis anguste lanceolatis lanceolato-linearibus vel linearibus 1~6.8 mm latis, sepalis floris staminati lanceolato-linearibus vel linearibus 1~3(~4.5) mm latis differt.

Liana suffrutescens, dioica. Rami graciles, 1~1.2 mm diametro, vadosae 4~6-canaliculati, glabri. Folia bis vel ter pinnatisecta; pinnae 1~3-jugatae, inferiores graciliter stipitatae, semel vel bis sectae; lobi ultimi sessiles, chartacei, anguste lineares, 6~26 mm longi, 1~2 mm lati, apice acuti, margine integri, supra glabri, subtus prope basin pilosi vel glabri, costa media subtus fere plana; petioli graciles, 1.3~4 cm longi, subglabri. Cymae staminatae axillares, 3~4-florae; pedunculi graciles, 0.9~2 cm longi, subglabri; bracteae lineares, 2~3 mm longae, puberulae. Flos staminatus 3~4.5 cm diametro; pedicellus 6~15 mm longus, sparse puberulus; sepala 4, patentia, anguste lineararia, 1.6~2.4 cm longa, 1.1~2 mm lata, apice caudato-attenuata, intus glabra, extus sparse adpresseque puberula, margine velutina; stamina 3~8 mm longa, glabra, filamentis anguste linearibus, antheris oblongis vel late oblongis 0.8~1 mm longis apice obtusis.

**Australia:** West Australia, Swan River, 1843, Drummond 1 (holotype, K).

Subsect. 4. *Aristatae* (Prantl) W. T. Wang, comb. nov. —Sect. *Flammula* DC. 11. *Aristatae* Prantl in Bot. Jahrb. 9: 260. 1888; H. Eichler in Bibl. Bot. 124: 32. 1958; Tamura in Sci. Rep. Osaka Univ. 16(2): 33. 1967. Lectotype: *C. aristata* R. Br. ex Ker Gawler.

Sect. *Clematis* subsect. *Papuasicae* H. Eichler in Bibl. Bot. 124: 35. 1958; Tamura in Sci. Rep. Osaka Univ. 16(2): 33. 1967. —Sect. *Aspidanthera* subsect. *Papuasicae* (H. Eichler) M. Johnson, l. c. TYPE: *C. papuasica* Merr. & Perry.

Sect. *Aspidanthera* subsect. *Aspidanthera* M. Johnson, *Clematis* 493. 1997. TYPE: *C. aristata* R. Br. ex Ker Gawler.

Folia plerumque ternata, raro simplicia. Inflorescentia ex axilla folii rami homotini nascens. Sepala 4, raro 4~6 (*C. gentianoides*), valvata, patentia, anguste oblonga, lanceolata, vel linearia, extus ad margines anguste velutina, staminibus paulo, raro 2~3-plo longiora. Connectivum apice conspicue productum. Staminodia praesentia, 3~8 (~14).

Ser. 1. **Pickeringianae** W. T. Wang, ser. nov. TYPE: *C. pickeringii* Gray.

Connectivi projectura globoso-conica, 0.1~0.2 mm longa et crassa.

6 species (*C. dubia* (Endl.) P. S. Green, *C. pickeringii* Gray, *C. novocaledoniaensis* W. T. Wang, *C. clemensiae* H. Eichler, *C. tuaensis* H. Eichler, *C. cruttwellii* H. Eichler), widespread in Fiji, New Caledonia, Norfolk Island, Solomon Islands, NE Australia, Papua New Guinea, and Indonesia.

### 3.3 *Clematis novocaledoniaensis* W. T. Wang, sp. nov. Fig. 3: 1~4

Affinis *C. pickeringii* Gray, quae foliolis papyraceis basi truncatis subtruncatis vel subcordatis, acheniis anguste lanceolatis vel fusiformibus saepe leviter lunulato-curvatis 4~7 mm longis 1.2~2 mm latis in quoque latere longitudinaliter 3-costatis differt.

Liana lignosa, dioica. Rami teretes, vadosae 8~12-canaliculati, glabri vel ad nodos tantum sparse puberuli. Folia ternata; foliola coriacea, cordata vel late ovata, 3~7 cm longa, 2.8~5 cm lata, apice acuta vel acuminata, basi cordata vel subcordata, margine integra et leviter incrassata, utrinque glabra vel subtus prope basin sparsissime puberula, nervis basalibus 5 subtus paulo prominentibus vel fere planis, nervulis inconspicuis; petioli 2~6 cm longi. Cymae staminatae axillares et terminales, multi-florae, paniculiformes; pedunculi 2~6.5 mm longi, sparse puberuli; bracteae petiolatae, folioliformes. Flos staminatus 1.2~1.5 cm diametro; pedicellus 5~15 mm longus, dense puberulus; sepala 4, alba, patentia, anguste lanceolato-oblonga, 6~7 mm longa, 1.2~1.8 mm lata, apice acuta, intus glabra, extus adpresso puberula, margine velutina; stamina 2~6 mm longa, glabra, filamentis linearibus, antheris anguste oblongis 0.8~1 mm longis, connectivorum projecturis globoso-conicis ca. 0.1 mm longis. Cymae pistillatae eis staminatis similes. Flos pistillatus ignotus. Achenia compressa, lanceolato-oblonga, 4~4.5 mm longa, 2~2.2 mm lata, puberula, longitudinaliter rugosa; styli persistentes ca. 4 cm longi, plumosi.

**New Caledonia:** on hills near Dotio, 1871-09, Balansa 3620 (♂, holotype, P); Mt. Koniambo, alt. 400~800 m, plant trailing among shrubs, staminate fls. white, 1956-03-31, McKee 4262 (♂, K); Mt. Kaala, alt. 700 m, in bushes, fruits dark red, 1984-06-04. McKee 41961 (♀, US).

Ser. 2. **Aristatae** W. T. Wang, ser. nov. TYPE: *C. aristata* R. Br. ex Ker Gawler.

Connectivi projectura graciliter columnaris vel graciliter subulata, 0.5~4.5 mm longa.

Ca. 9 species (*C. phanerophlebia* Merr. & Perry, *C. sclerophylla* W. T. Wang, *C. gentianoides* DC., *C. tenuimarginata* H. Eichler, *C. stenantha* H. Eichler, *C. glycinoides* DC., *C. aristata* R. Br. ex Ker Gawler, *C. popuasica* Merr. & Perry, *C. clitorioides* DC.), widespread in Papua New Guinea, E Indonesia, Australia and Tasmania.

Subsect. 5. **Hexapetalae** (Prantl) W. T. Wang, st. et comb. nov. — Sect. *Flammula* DC. 10. *Vitalbae* Prantl d. *Hexapetalae* Prantl in Bot. Jahrb. 9: 260. 1888, p. p., excl. *C. microphylla* DC. Lectotype: *C. hexapetala* L. f. (= *C. fosteri* Gmel.) — Sect. *Clematis* subsect. *Hexapetalae* (Prantl) Snoger in *Clematis* 1992: 15, 1992, syn nov. Lectotype:

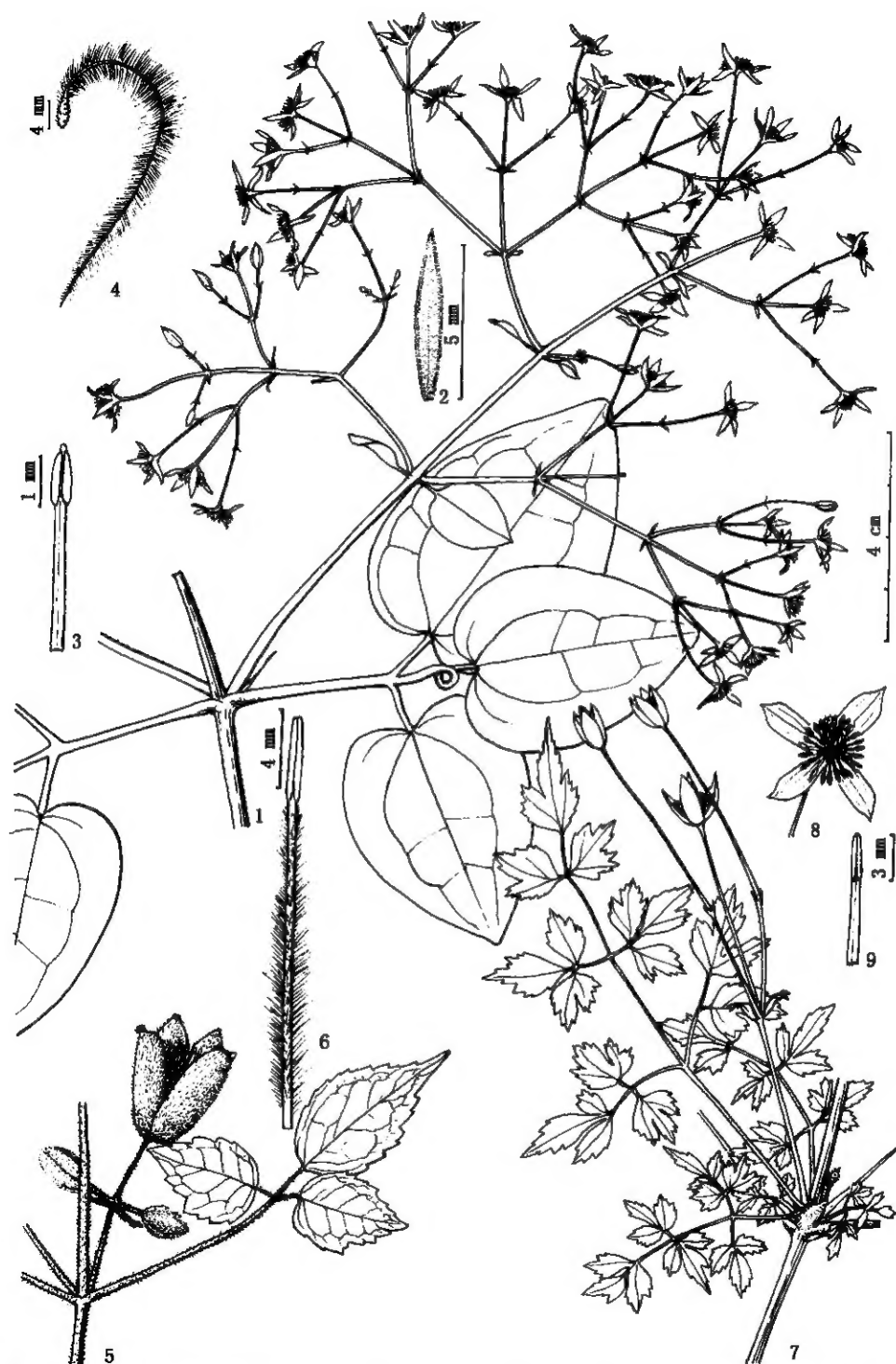


Fig. 3 1~4. *Clematis novocaledoniaensis* 1. Flowering branch; 2. Sepal; 3. Stamen (from McKee 4262); 4. Achene (from McKee 41961). 5~6. *C. nagaensis* 5. Part of flowering branch; 6. Stamen (from F. Kingdon Ward 18900). 7~9. *C. zemuensis* 7. Part of flowering branch (from Hara *et al.* 723354); 8. Flower; 9. Stamen (from Stainton *et al.* 3514).



*C. hexapetala* L. f. (= *C. fosteri* Gmel.).

Sect. *Novae-Zelandiae* M. Johnson, Klematis 159. 1997, syn. nov. TYPE: *C. fosteri* Gmel.

Folia plerumque semel vel bis ternata, raro simplicia. Inflorescentia ex axilla folii rami hornotini nascens. Sepala 4 ~ 8, valvata vel imbricata (Godley, 1977), patentia, lanceolata, anguste oblonga, linearia, raro obovata, extus ad margines haud velutina, staminibus vulgo 2 ~ 3-plo longiora. Connectivum haud productum, raro minute inconspicueque productum. Staminodia praesentia, 2 ~ 4 (8 ~ 13).

Ca. 11 species, endemic to New Zealand.

Ser. 1. *Afoliatae* W. T. Wang, ser. nov. TYPE: *C. afoliata* Buchan.

Lianae procumbentes. Folia vulgo laminis carentia, raro laminis parvis ternatis instructa. Pedicellus bracteolis bene evolutis carens. Sepala 4, lanceolata. Staminodia ca. 2.

1 species.

Ser. 2. *Maratae* W. T. Wang, ser. nov. TYPE: *C. marata* Armstr.

Lianae suffrutescentes. Folia ternata. Pedicellus bracteolis oppositis ovatis vel spathulatis liberis vel basi connatis instructus. Sepala 4, lanceolata vel linearia. Staminodia 2 ~ 4.

2 species (*C. marata* Armstr., *C. quadribacteolata* Colenso).

**3.4 *Clematis quadribacteolata*** Colenso in Trans. New Zealand Inst. 14: 329. 1882; Kirk, Stud. Fl. New Zealand 4. 1899; Cheesem. Mem. New Zealand Fl., 2nd ed., 433. 1925; Allan, Fl. New Zealand. 1: 171. 1961; M. Johnson, Klematis 170. 1997. TYPE: New Zealand. Hawke's Bay, S. W. and S. side, Colenso s. n. (holotype? K!; isotype, GH!).

*C. foetida* Raoul var. *depauperata* Hook. f. Fl. Nov. Zeland. 7. 1852; et Handb. New Zealand Fl. 2. 1867. — *C. hexapetala* L. f. ssp. *depauperata* (Hook. f.) Kuntze in Verh. Bot. Ver. Brand. 26: 108. 1885. TYPE: New Zealand. Lake Rotoatara, Colenso s. n. (holotype, K!).

*C. parviflora* Cunn var. *depauperata* Hook. f. Handb. New Zealand Fl. 2. 1867; Kirk, Stud. Fl. New Zealand 5. 1899; Cheesem. Man. New Zealand Fl. 2nd ed., 432. 1925; M. Johnson, Klematis 169. 1997, syn. nov. TYPE: New Zealand. Nelson, 1861, Travers s. n. (holotype, K!). — *C. marata* auct. non Armstr.: Allan, Fl. New Zealand 1: 168. 1961, p. p. quoad Travers s. n.

**New Zealand:** Canterbury, Page 12431 (US).

*C. quadribacteolata* is closely related to *C. marata*, differing from the latter in its connate bracteoles, narrower linear sepals, and hairy ovaries and achenes. In *C. marata*, the bracteoles are free, the sepals are broader, narrowly ovate or lanceolate in outline, and the ovaries and achenes are glabrous.

Ser. 3. *Hexapetalae* W. T. Wang, ser. nov. TYPE: *C. fosteri* Gmel.

Lianae lignosae. Folia semel vel bis ternata. Sepala (4 ~ )5 ~ 6 (~ 8), lanceolata vel anguste oblonga. Staminodia 3 ~ 5.

7 species (*C. fosteri* Gmel., *C. paniculata* Gmel., *C. parviflora* Cunn., *C. foetida* Raoul, *C. hookeriana* Allan, *C. petriei* Allan, *C. australis* Kirk).

Ser. 4. *Marmorariae* W. T. Wang, ser. nov. TYPE: *C. marmoraria* Snedden

Plantae erectae, humiles, suffrutescentes. Folia simplicia, palmatim 3-secta. Sepala 5 ~ 8, anguste obovata. Staminodia 8 ~ 13.

1 species.

Subsect. 6. **Insidiosae** W. T. Wang in Acta Phytotax. Sin. 38(4):315. 2000. TYPE: *C. insidiosa* Baill.

Folia semel ad ter pinnata. Inflorescentia ex axilla folii rami hornotini nascens. Sepala 4 (~ 6), valvata, ea floris staminati patentia, ea floris pistillati erecta, linearia vel lanceolato-linearia, extus ad margines anguste velutina, staminibus subaequilonga vel eis paulo breviora. Staminodia nulla in floribus pistillatis.

2 species, endemic to Madagascar.

Ser. 1. **Insidiosae** W. T. Wang, ser. nov. TYPE: *C. insidiosa* Baill.

Folia pinnata, 5-foliolata, interdum ternata, foliolis magnis vel mediocribus.

1 species.

Ser. 2. **Rutoides** W. T. Wang, ser. nov. TYPE: *C. rutoides* W. T. Wang.

Folia ter pinnata, foliolis numerosis parvis.

1 species.

#### 4 尾叶铁线莲组 Sect. **Viorna** (Reich.) Prantl.

尾叶铁线莲亚组 Subsect. **Connatae** Koehne.

##### 4.1 **Clematis nagaensis** W. T. Wang. sp. nov. Fig. 3: 5 ~ 6

Affinis *C. leschenaultianae* DC., quae ramis pedunculisque dense patule fulvo-pubescentibus vel fulvo-velutinis, foliolis majoribus usque ad 11 cm longis 6 cm latis, filamentis dense villosis, antheris anguste oblongis brevioribus ca. 2.5 mm longis glabris distinguitur.

Liana lignosa. Rami graciles, ca. 1 mm diametro, vadosae 4-canaliculati, sparse sed prope apicem adpresse fulvo-puberuli. Folia ternata, interdum 2-foliolata, suprema simplicia; foliola chartacea, ovata vel rhombico-ovata, 2 ~ 3.8 cm longa, 1.5 ~ 1.8 (~ 3) cm lata, apice acuminata vel breviter acuminata, basi rotundata, margine denticulata, indivisa vel lateralia inaequaliter 2-lobata, utrinque adpresse albido-puberula, subtus ad nervos fulvo-puberula, nervis basalibus lateralibusque supra impressis subtus prominentibus; petioli 1 ~ 3.8 cm longi. Cymae axillares et terminales, 1 ~ 3-florae; pedunculi 1 ~ 3.8 cm longi, cum pedicellis dense fulvo-puberuli; bracteae anguste triangulares, ca. 4 mm longae, vel late ovatae, 1.4 ~ 3 cm longae. Flos 2 ~ 2.5 cm diametro; pedicellus 1 ~ 1.5 cm longus; sepala 4, erecta, oblongo-lanceolata, 2 ~ 2.4 cm longa, 6 ~ 9 mm lata, apice acuminata, intus superne albido-puberula alibi glabra, extus dense adpresseque fulvo-puberula, margine albido-velutina; stamina 1.6 ~ 1.9 cm longa, filamentis anguste lanceolato-linearibus dense pubescentibus, antheris linearibus vel late linearibus 3 ~ 4 mm longis apice obtusis interdum minute apiculatis dorso inferne pilosis; carpella dense villosa.

**India.** Naga Hills, Zakhoma, alt. 1650 m, at forest margin, 1949-10-19, F. Kingdon Ward 18900 (holotype, GH).

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## 《The Plant - Book》简介

**The Plant-Book** (2nd edition) — A portable dictionary of the vascular plants utilizing Kubitzki's the families and genera of vascular plants (1990-), Cronquist's An integrated system of classification of flowering plants (1981), and current botanical literature arranged largely on the principles of editions 1 ~ 6 (1896/97-1931) of Willis's A dictionary of the flowering plants and ferns. 2nd edition (completely revised with almost 2500 additional new entries) by D. J. Mabberley. Cambridge, UK: Cambridge University Press. 1997, XVI, 858pp., ISBN 0-521-41421-0.

内容的主体部分(即 Dictionary, pp. 1 ~ 770)列出了目前世界上所承认的非化石维管植物的科、属名称、常见异名和俗名(英语名称)等共 20,000 多条条目。科名后列有作者名, 所属门、纲、目、属、种的数目和分布, 科的特征描述, 科下分类系统和主要的属名; 属名后跟有作者名(即命名人)、所属科名、种数、分布、经济价值及其他用途(常列出具体种作例证), 有时还指明该属在科内的系统位置。如果有最新的科属修订或检索表也给予注明; 特别是英文俗名(条目首字母排小写)及其所属类群拉丁名对中国读者尤为有用, 这些俗名时常出现在英文文章甚至专业文章中, 往往在任何辞典中都查不到。该书所采用的分类系统以 Kubitzki (1990) 修改过的 Cronquist (1981) 系统为主, 同时根据近年来发表的几个新的科级分类系统略加调整。在具体问题上, 作者采取了比较保守的态度, 如将豆科 Leguminosae 作为一个科处理, 而绝大多数学者都将它们分为三个科。然而, 对于其他科, 则是根据最新的科研成果进行处理的, 如菊科 Compositae 和茜草科 Rubiaceae 是分别根据 Bremer (1994) 和 Robbrecht (1993, 1988) 的分类系统进行处理。

该书前面的 Preface (pp. IX-XIII) 和 How to use this book (pp. XIV-XVI), 介绍了编著该书的背景、收录资料的原则和根据以及该书的使用方法, 后面的 Acknowledgement of sources (pp. 783 ~ 798) 和 Abbreviations (pp. 799 ~ 858), 列出了作者编撰该书所参考的文献和书中所引用书刊及作者缩写的全称。这后两部分独立开来, 实际上就是一个简便的分类学常用书刊和作者名录, 亦为国内读者难得的资料。

大家知道, 在该书第一版(1987)出现以前, 国际上广为采用的维管植物科属辞典是 J. C. Willis 的《A Dictionary of the Flowering Plants & Ferns》, 国内通称“Willis 辞典”。其最后版本(8th edition, revised by H. K. Airy Shaw 1973, Cambridge University Press)中条目后面省掉了许多信息, 如俗名和经济价值等, 实际上“Willis 辞典”就变成一本植物名词词典。而 Uphof (1968), Usher (1974) 和 Howes (1974) 的辞典则把这些信息全部收载, 但只限于经济(有用)植物。该书集二者之长, 按“Willis 辞典”原理编排, 补充了最新资料, 所收资料更新更全。

该书第一版(1987)曾在 1989、1990、1993、1996 等多次重印(加少量修改), 我国曾有影印, 但数量很少, 极难得到。第二版在此基础上对所有条目进行了全部修订, 纠正了不少内容上的误漏或书写、编辑错误, 增加了 2500 个新条目。因此该书包含的信息量很大, 可从书中查到较新、较全的植物名称及相关信息。另外该书为精装本, 体积小(23.5 cm x 12 cm x 3.5 cm), 真正轻便、实用, 值得向国内所有对植物感兴趣的人, 包括系统学家、生物化学、植物多样性、物种保护、园艺等领域的专业工作者和业余爱好者推荐。